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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,208	02/13/2006	Markus Schmid	29827/41857	8023

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EXAMINER	
BERNSHTEYN, MICHAEL	

ART UNIT	PAPER NUMBER
1796	

MAIL DATE	DELIVERY MODE
02/20/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/568,208	SCHMID ET AL.	
	Examiner	Art Unit	
	MICHAEL M. BERNSHTEYN	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☒ Claim(s) *2,3,9-14,17 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/13/06,08/14/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 2, 3, 9-14, 17 and 18 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claims 2 and 3 accordingly recite that the water content of the monomer solution is at least 65% by weight, and at least 70% by weight without any upper limit of the range. Thus, it does not constitute a further limitation. A proper dependent claim shall not conceivably be infringed by anything which would not also infringe the basic claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

> invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-7 and 9-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Yada et al. (U.S. Patent 5,059,664 or EP 0 348 180 A2).

With regard to the limitations of claims 1-7 and 9-19, Yada discloses a process for the preparation of water absorptive resins which comprises supplying a solution containing at least 20% by weight of a water soluble ethylenically unsaturated monomer as a main component to a polymerization vessel accommodating a vapor phase comprising steam or a mixture of steam with at least one gas substantially inert with

respect to polymerization, and polymerizing the monomer in the vapor phase under the relative humidity conditions in the vapor phase of 30% or more (abstract).

With regard to the limitations of water content in claims 1-3, it is the Examiner position that Yada anticipated the claim's limitations because Yada clearly discloses the minimum concentration of 20% by weight of the water soluble ethylenically unsaturated monomer; therefore the water content could be 80% by weight or less, which is within the claimed ranges.

With regard to the limitations of the reaction temperature in claims 1, 4, 9 and 10, Yada discloses that in terms of the polymerization temperature after the initiation of polymerization, a temperature of generally 10^0 to 300^0C, preferably 20^0 to 250^0C is applied, although the polymerization temperature correlates with how to effect the initiation of polymerization and the rate of polymerization. At a temperature lower than 10^0C, any industrial process is not economically achievable, since the rate of polymerization slows down with an increase in the space distance involved. At a temperature exceeding 300^0C, on the other hand, the resulting polymers increase in the density of crosslinking because of their aptness to self-crosslinking, leading to decrease in the water absorption capacity (col. 8, line 66 through col. 9, line 11). The above mentioned ranges mainly are within the claimed ranges.

With regard to the limitations of claims 5, 7, 11, 13, 15, and 17-19, Yada discloses that the water soluble monomers imparting such capacity to the resins may include water soluble ethylenically unsaturated monomers having functional groups derived from carboxylic acids and/or their salts, phosphoric acids and/or their salts and

sulfonic acids and/or their salts. More specifically, use may be made of, e.g., **(meth)acrylic acid** or its salt, maleic acid or its salt, itaconic acid or its salt, vinylsulfonic acid or its salt, 2-acrylamide-2-methylpropanesulfonic acid or its salt, 2-acryloylethanesulfonic acid or its salt, 2-acryloylpropanesulfonic acid or its salt, 2-methacryloylethanesulfonic acid or its salt and vinylphosphonic acid or its salt, which may be used alone or in combination of two or more. It is understood that the term "(meth)acryl" shall mean both "acryl" and "methacryl". Among others, particular preference is given to acrylic acid or (and) its salt in which at least 20% of its carboxyl groups are neutralized into its alkali metal or ammonium salt by sodium hydroxide, potassium hydroxide, ammonium hydroxide and the like (col. 4, lines 33-53).

With regard to the limitations of claims 6, 12, 14 and 16, Yada discloses that in the case of partially neutralized sodium salt of acrylic acid, the salt in which 20% to below 95%, **more preferably 40% to below 80%** of the carboxyl groups are neutralized may be used (col. 4, lines 55-59). In the case of partially neutralized potassium salt of acrylic acid, the salt in which 40% or more, preferably 60% or more of the carboxyl groups are neutralized may be used (col. 4, line 68 through col. 5, line 3). The above mentioned ranges are within the claimed ranges.

3. Claims 8 and 20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yada et al. (U.S. Patent 5,059,664 or EP 0 348 180 A2).

The disclosure of Yada's reference resided in § 2 is incorporated herein by reference.

With regard to the limitations of claims 8 and 20, Yada does not disclose a water-swellable polymer prepared by the process of claim 1, wherein the free-radicallly polymerized monomer is acrylic acid, methacrylic acid, or a mixture thereof.

Regarding the water-swellable polymer limitations, in view of substantially identical monomers, initiators, aqueous solution, temperatures of polymerization, process of free radical polymerization for producing such products being used by both Yada and the applicant, it is the examiner position to believe that the product, i.e. water absorptive resin of Yada is substantially the same as the water-swellable polymer recited in claims 8 and 20, consult ***In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).***

Since the USPTO does not have proper equipment to do the analytical test, the burden is now shifted to the applicant to prove otherwise.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL M. BERNSHTEYN whose telephone number is (571)272-2411. The examiner can normally be reached on M-Th 8-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael M. Bernshteyn/
Examiner, Art Unit 1796

/M. M. B./
Examiner, Art Unit 1796